Processes to Improve Work Zone Progression

99th Annual Purdue Road School

Pat McCarty

March 5, 2013
WORK ZONE PROGRESSION

Interstate Work Zones

- New Interstate Highway Congestion Policy
- Capacity Studies
- New Devices
I. Policy Section

- Prohibits operations on an Interstate Route which:
  - Restrict lanes
  - Cause congestion
  - Except as noted within
INTERSTATE HIGHWAYS CONGESTION POLICY

II. Purpose

Purpose is to comply with Federal Code

III. Administered by:

Administered and maintained by INDOT’s Traffic Management Division

IV. Terms/Acronyms/Definitions

List of the Terms, Definitions and Acronyms used in the policy
V. APPLICATION OF THE POLICY

- Contains ten parts which describe:
  - Who must follow the policy
  - When it applies and when it doesn’t
  - Where it applies
  - How to seek an exception
  - What data collection is required
VI. Pre-Reporting Requirements

- Any closures must be reported to the TMC
- The report is to include:
  - Closure information
  - Contact Information
VII. Policy Approval

- Replaces all prior policies
- Grandfathers Existing Waivers
- Effective dates:
  January 31, 2013 for INDOT Maintenance, permits...
  RFC date on or after April 1, 2013
Appendix A

- Emergency Repairs
  - Suggested use
  - Reporting requirements
- Urgent Repairs
  - Suggested use
  - Queue development
  - Reporting requirements
  - Prevention of future urgent repairs
## Interstate Highways Congestion Policy

### Table

<table>
<thead>
<tr>
<th>Section</th>
<th>Start Exit</th>
<th>End Exit</th>
<th>2009 Schedule</th>
<th>Length (mi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I 465 to 116th St</td>
<td>0</td>
<td>5</td>
<td>Nighttime Only</td>
<td>5</td>
</tr>
<tr>
<td>116th St to SR 38</td>
<td>5</td>
<td>19</td>
<td>Executive Approval</td>
<td>14</td>
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<tr>
<td>SR 38 to SR 12</td>
<td>10</td>
<td>64</td>
<td>Nighttime Only</td>
<td>45</td>
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<tr>
<td>SR 18 to US 224</td>
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<td></td>
<td>Anytime</td>
<td>22</td>
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<tr>
<td>US 24 to SR 1</td>
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<td></td>
<td>Weekend or Night-time Only</td>
<td>16</td>
</tr>
<tr>
<td>SR 1 to 5</td>
<td></td>
<td></td>
<td>Weekday or Night-time Only</td>
<td>14</td>
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<tr>
<td>SR 4 to Michigan</td>
<td></td>
<td></td>
<td>Night-time</td>
<td>24</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Executive Approval</td>
<td>18</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Minimum 3 lanes / Direction</td>
<td></td>
</tr>
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Appendix C

- Policy Exceptions
  - Approval requirements
  - Who is responsible to seek an exception
  - What requires an exception
  - How to request one
## Appendix D

<table>
<thead>
<tr>
<th>Speed of Pilot Vehicle (MPH)</th>
<th>20 Minutes</th>
<th>30 Minutes</th>
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<tbody>
<tr>
<td>45</td>
<td>52</td>
<td>55</td>
</tr>
<tr>
<td>50</td>
<td>55</td>
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<tr>
<td>90</td>
<td>95</td>
<td>98</td>
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</table>

*Image: INDIANA STATE POLICE*
Appendix D

- Rolling Slowdowns
  - Diagram (Figure D-1)
WORK ZONE QUEUE & DELAY REPORT FORM

Contract No. ____________________
Base & Project Limit/Location: ____________________
County: ____________________ District: ____________________
Location: ____________________ (see area 1)

Date: ______/____/____

Measurement 1:
Direction of Travel: ____________________ Time: ______ a.m./p.m.
Location of Queue (see area 2a):
Queue Length: _______ miles Delay: ______ minutes

Measurement 2:
Direction of Travel: ____________________ Time: ______ a.m./p.m.
Location of Queue (see area 2b):
Queue Length: _______ miles Delay: ______ minutes

Comments: ____________________

Signed: ____________________

NOTES:
1. Occasion refers to the event (e.g., start of construction, phase change, location change) that is prompting the measurements.
2. Location of Queue refers to the location at which the queue begins. For instance, "the left lane merges taper for the crossover at station 123+50".

Form Date: 02/2012
## CAPACITY STUDIES

### Work Zone Capacity

Table C-2: Suggested Working Hour Capacities

<table>
<thead>
<tr>
<th>Work Zone Type</th>
<th>Lanes Maintained</th>
<th>Effective Lane Width</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&gt; or = 11’</td>
</tr>
<tr>
<td>Short Term</td>
<td>1 or more</td>
<td>1600</td>
</tr>
<tr>
<td>Long Term, traffic not crossed over</td>
<td>1</td>
<td>1750</td>
</tr>
<tr>
<td>Long Term, traffic crossed over</td>
<td>1</td>
<td>1550</td>
</tr>
<tr>
<td>Long Term, either traffic crossed or not crossed</td>
<td>2 or more</td>
<td>1750</td>
</tr>
</tbody>
</table>
Work Zone Capacity

- Data Collection Project
- Purpose
- Methodology
- Sites selected
Double lane count at about 1.25 miles S. of arrow board. N. of ramp from Marion Center Road. About MP 14.

- Single lane count just past end of taper and before exit to Tillman Road About MP 15.4
- 4 time lapse cameras. 2 facing N. and 2 facing S. (for redundancy) mounted on fence posts on each side of Wayne Trace at the top of the slope.
Map of approximate location of data collection points on I-70
NEW DEVICE STUDIES

Sequential Lights

- What are they
- Why use them
- Pilot projects
Are there any questions?